

REMARKS

I. Formalities

Applicant notes that the Examiner did not acknowledge the claim for domestic priority under 35 U.S.C. § 119 by checking box 14 on the PTO form PTOL-326. Further, Applicant notes that the Examiner did not acknowledge receipt of the certified copy of the priority document submitted by Applicant on December 15, 2000. Thus, Applicant respectfully requests that the Examiner acknowledge the claim for domestic priority, and receipt of the aforementioned priority document.

Applicant thanks the Examiner for considering the references cited with the Information Disclosure Statement filed on February 2, 2004.

Applicant thanks the Examiner for indicating that the Formal Drawings filed on December 15, 2000 are accepted.

II. Status of the Application

By the present amendment, claims 1 and 3-18 have been amended, and claims 19-21 are hereby added to cover more fully various implementations of the invention. In addition, claim 2 is hereby cancelled without prejudice or disclaimer. Claims 1 and 3-21 are all the claims pending in the Application, with claims 1, 13, and 19 being in independent form. Claims 1-6, 8, 11, 13-14, and 16 have been rejected.

III. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claims 7, 9-10, 12, 15, and 17-18 would be allowable if rewritten in independent form, including all the limitations of their

respective base claims and any intervening claims. Accordingly, Applicant hereby adds new claim 19, which corresponds to claim 15 rewritten in independent form, and new claims 20-21 which respectively correspond to original claims 17-18. Thus, Applicant respectfully submits that new claim 19 is immediately allowable. Further, Applicant submits that the dependent claims 20-21 are immediately allowable *at least* by virtue of their dependency on claim 19. Claims 15 and 17-18 have been maintained, but are allowable for reasons explained below.

However, Applicant respectfully requests that the Examiner hold in abeyance such rewriting of claims 9, 7, 10, and 12 until the Examiner has had an opportunity to reconsider (and withdraw) the prior art rejection of the other claims.

IV. Objections to the Claims

The Examiner has objected to claim 11 as being an indefinite multi-dependent claim. Accordingly, Applicant has amended claim 11 to depend from claim 1, as set forth above. Thus, Applicant respectfully requests that the Examiner withdraw this objection.

V. Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected claims 1, 13-14, and 16 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,488,641 to Ozkan (hereinafter "Ozkan"). Applicant respectfully traverses this rejection for *at least* the reasons stated below.

According to the MPEP, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131. Applicant respectfully submits that claims 1, 13-14, and 16 positively recite limitations which are not disclosed (or suggested) by Ozkan.

A. Independent Claim 1

Independent claim 1 is now amended to incorporate the requirements of original claim 2, and requires:

employing a number of delayed signals, such that the sum of the shifts associated with such delayed signals covers the bit period of the input data signal;

Ozkan discloses a digital phase-locked loop timing circuit for synchronizing a local clock signal to a received input data signal. *See* column 1, lines 8-11. In particular, Ozkan discloses that the circuit 200 includes a chain of delay elements in the form of $2n$ inverters 210, one end of which is coupled to a terminal 205 for receiving a local clock signal. *See* column 3, lines 63-65. Moreover, the chain of $2n$ inverters 210 are serially connected to create n taps, each providing a signal exhibiting one unit of delay. *See* column 3, lines 58-61. However, Ozkan does not teach or suggest that “the sum of the shifts associated with [the] delayed signals covers the bit period of the received input data signal,” as required by claim 1. In fact, the Examiner acknowledges that Ozkan does not disclose or suggest this feature and relies on U.S. Patent No. 5,371,766 to Gersbach *et al.* (hereinafter “Gersbach”) in an attempt to cure the deficient teachings Ozkan.

Therefore, because Ozkan does not disclose or suggest that the sum of the shifts associated with the delayed signals covers the bit period of input data signal, as required by claim 1, Applicant respectfully submits that independent claim 1 is patentable over Ozkan for *at least* these reasons.

B. Independent Claim 13

Independent claim 13 requires:

wherein the sum of the shifts
associated with such delayed signals covers
the bit period of the input data signal.

In view of the similarity between this requirement and the requirement discussed above with respect to independent claim 1, Applicant respectfully submits that the foregoing arguments as to the patentability of independent claim 1 apply by at least analogy to claim 13. As such, it is respectfully submitted that claim 13 is patentably distinguishable over Ozkan for at least these reasons. Further, Applicant submits that claims 14 and 16 are allowable *at least* by virtue of their dependency on claim 13. Thus, the allowance of these claims is respectfully solicited of the Examiner.

VI. Claim Rejections under 35 U.S.C. §103

The Examiner has rejected claims 2-6, 8, and 11 under 35 U.S.C. § 103(a) as being unpatentable over Ozkan in view of Gersbach. Applicant respectfully traverses this rejection for *at least* the reasons stated below.

Since Applicant has canceled claim 2, the Examiner's rejection with respect to claim 2 is now moot.

Further, in order for the Examiner to maintain a rejection under 35 U.S.C. §103, Ozkan, Gersbach, or some combination thereof, must teach or suggest all of the limitations of claims 3-6, 8, and 11. Applicant respectfully submits that neither Ozkan, Gersbach, nor any combination thereof, teaches or suggests all of the limitations of claims 3-6, 8, and 11.

Applicant notes that independent claim 1 is hereby amended to incorporate the requirements of original claim 2. As such, independent claim 1 requires:

employing a number of delayed signals,
such that the sum of the shifts associated
with such delayed signals covers the bit
period of the input data signal;

With respect to the original claim 2 (the requirements of which have been incorporated into amended claim 1), the grounds of rejection acknowledge that Ozkan fails to teach or suggest that “the sum of the shifts associated with [the] delayed signals covers the bit period of the input data signal,” as required by amended claim 1.

Nevertheless, the grounds of rejection rely on Gersbach in an attempt to remedy the deficient teachings of Ozkan, alleging that Gersbach teaches that the sum of the delays of the n phase-delayed signals corresponds to the period T_{local} of the local clock signal 52. See column 5, lines 38-40. Accordingly, the grounds of rejection allege that it would have been obvious to one of ordinary skill in the art to combine the disclosure of Ozkan, with the teachings of Gersbach, to have a taped delay line of shifted delayed clock signals where the sum of the shifts equals one bit or clock period. In particular, the grounds of rejection allege that the motivation for such a combination lies in that, for fine phase detection the phase shift typically used is less than the clock period to ensure that the shift does not over-shift and miss the trigger edges of the clock signal. Applicant respectfully disagrees with the grounds of rejection.

Gersbach does not teach or suggest that the sum of the shifts associated with the delayed signals covers the bit period of the input data signal, as required by claim 1. In contrast to the requirements of claim 1, Gersbach teaches that the programmable frequency clock pulse

generator 32 includes a delay element (not shown in any of the figures) for establishing a plurality of phase-delayed local clock signals 54a-n. See column 5, lines 31-36. Gersbach also teaches that the sum of the delays of the n phase-delayed signals corresponds to the period T_{local} of the local clock signal 52. See column 5, lines 38-40. Further, Gersbach teaches that each of the n phase-delayed signals is shifted in time about $1/n$ of the local clock signal period. See column 5, lines 43-44. However, Gersbach does not provide any suggestion whatsoever that that the sum of the delays of the n phase-delayed signals covers the bit period of the received data signal 48. In fact, Gersbach teaches quite the opposite—that the sum of the delays corresponds to the period T_{local} of the local clock signal 52. Thus, even if one of ordinary skill were to combine the teachings of Ozkan and Gersbach, one would not arrive at the claimed invention, wherein the sum of the shifts associated with such delayed signals covers the bit period of the input data signal.

Accordingly, neither Ozkan, Gersbach, nor any combination thereof, teaches or suggests employing a number of delayed signals, such that the sum of the shifts associated with such delayed signals covers the bit period of the input data signal, as required by claim 1. Thus, Applicant submits that independent claim 1, as now amended, is patentable over Ozkan, Gersbach, and any combination thereof, for *at least* these reasons. Further, Applicant respectfully submits that the dependent claims 3-6, 8, and 11 are allowable, *at least* by virtue of their dependency on claim 1. Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection.

Amendment Under 37 C.F.R. § 1.111
U.S. Serial No.: 09/736,294

Attorney Docket No.: Q62156

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

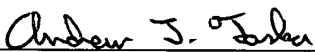
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